

SEATTLE / KING COUNTY PUBLIC HEALTH
Community Environmental Health
Plumbing / Gas Piping Inspections

**DECISIONS / INTERPRETATIONS
of the Chief Plumbing Inspector**

Date: June 29, 2011

Decision No. 11-004
REVISED

Subject: Horizontal Wet Venting for Bathroom Groups

Code / Section: 2009 UPC Section 908.2

Decision

Horizontal wet venting for bathroom groups is acceptable in accordance with state adopted code.

Background

The State of Washington adopted and amended the 2009 Uniform Plumbing Code effective July 1, 2010, including the horizontal wet venting provisions for bathroom groups. The attached document outlines the code provisions and provides further explanation of the provisions.

Effective Date: June 29, 2011



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Chief Plumbing Inspector
Public Health – Seattle & King County

2009 UPC Section 908.2

Horizontal Wet Venting for Bathroom Groups

1. Section 908.2.1 Where Permitted.

Water closets, bathtubs, showers, bidets, and floor drains within one (1) or two (2) bathroom groups located on the same floor level and for private use shall be permitted to be vented by a wet vent.

The fixtures being wet vented must be located on the same floor level and shall be located within the bathroom(s) being wet vented. No more than two bathrooms may be served by the same wet vent. The intent is that the two bathrooms would be relatively close to one another, such as back-to-back or side-by-side.

The wet vent may serve bathrooms that are located in any occupancy group, provided that the bathrooms are for private use. Private use is defined in Chapter 2 as plumbing fixtures in residences and apartments, private bathrooms in hotels and hospitals, and restrooms in commercial establishments where the fixtures are intended for the use of a family or an individual.

(See Notes B and C below)

2. Section 908.2.1 (cont'd)

The wet vent shall be considered the vent for the fixtures and shall extend from the connection of the dry vent along the direction of the flow in the drain pipe to the most downstream fixture drain or trap arm connection to the horizontal branch drain.

The vent (dry vent) serving the horizontal wet vent shall serve the uppermost fixture. Section 908.2.2 provides guidelines for the installation of the dry vent. (See Item 5)

3. Section 908.2.1 (cont'd)

Each wet-vented fixture drain or trap arm shall connect independently to the wet-vented horizontal branch drain. Each individual fixture drain or trap arm shall connect horizontally to the wet-vented horizontal branch drain or shall be provided with a dry vent. The trap to vent distance shall be in accordance with Table 10-1.

Since the wet-vented horizontal branch drain serves as the vent for the fixture traps connecting thereto, the trap arms must connect horizontally to the wet-vented branch drain and must meet the distance requirements for trap arms in Chapter 10. Except for water closets, where fixture traps are located above the horizontal branch drain the fixture trap must be individually vented. Water closet trap arms must connect horizontally to the wet-vented branch drain.

4. Section 908.2.1 (cont'd)

Only the fixtures within the bathroom group(s) shall connect to the wet-vented horizontal branch drain. The water closet fixture drain or trap arm connection to the wet vent shall be downstream of any fixture drain or trap arm connections. Any additional fixtures shall discharge downstream of the wet vent system and be conventionally vented.

If the fixture is not part of the bathroom(s) being wet vented, it must connect downstream of the wet vent. The intent is that only those fixtures that are 'bathroom' type fixtures are allowed to be served by the wet vent. 'Bathroom' type fixtures are water closets, urinals, lavatories, bathtubs,

showers, combination bathtub/showers, bidets and floor drains. A laundry washer or laundry sink that is located within a bathroom shall not be served by the wet vent and must connect downstream of the wet vent. Water closets shall connect downstream of other fixtures that are part of the bathroom group(s).

5. Section 908.2.2 Vent Connection.

The dry vent connection to the wet vent shall be an individual vent or common vent for the lavatory, urinal, bidet, shower or bathtub. Only one (1) wet-vented fixture drain or trap arm shall discharge upstream of the dry-vented fixture drain connection.

The dry vent shall be located at the most upstream fixture served by the wet vent. The requirements of Chapter 9 for vent connections and installation shall apply to the dry vent. The dry vent may also serve as a drain for a fixture, such as a lavatory and would then be installed in accordance with Section 905.6 for venting

(See Note D below)

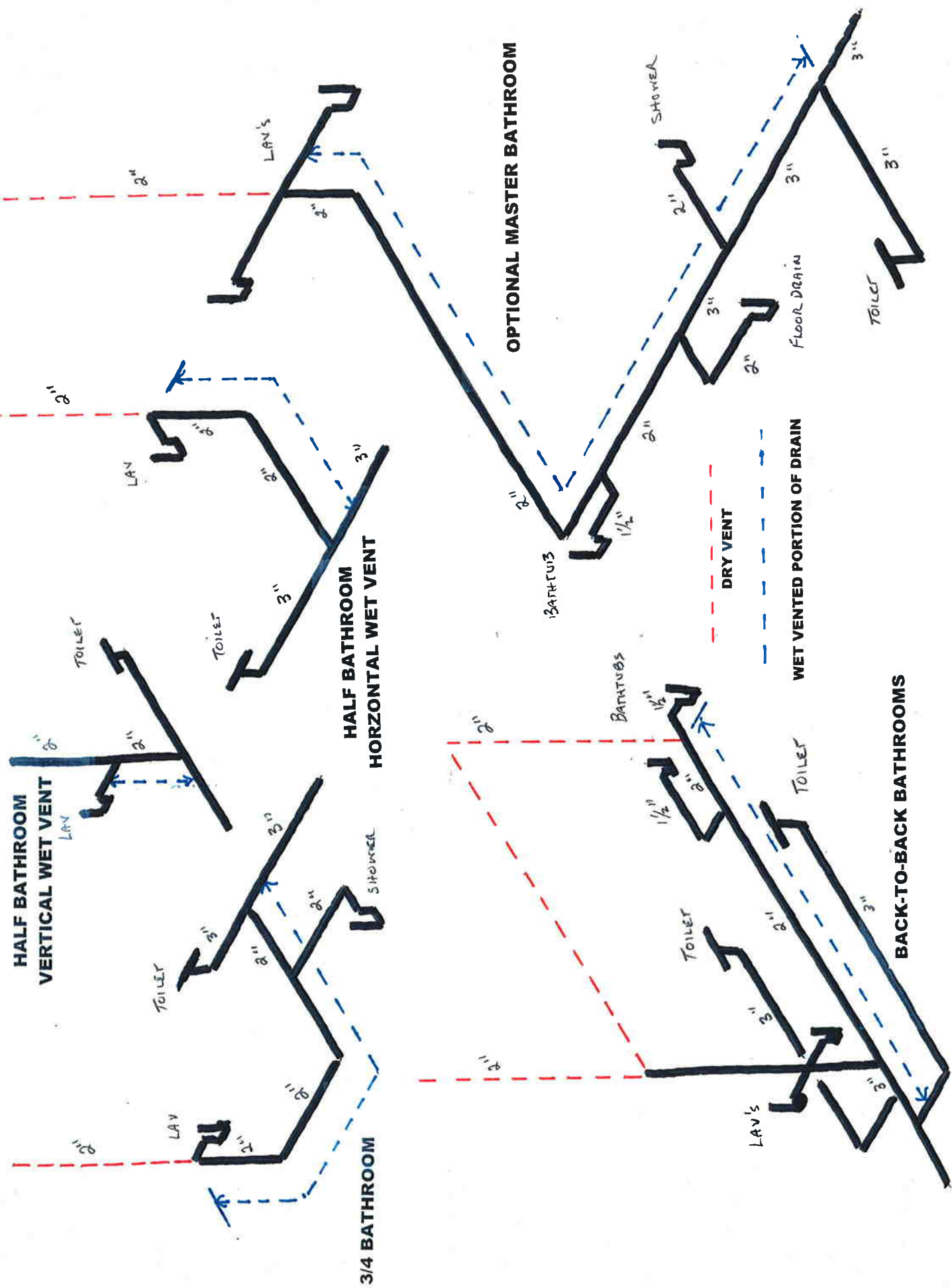
6. Section 908.2.3 Size.

The wet vent shall be sized based on the fixture unit discharge into the wet vent. The wet vent shall not be less than two (2) inches in diameter for four (4) dfu or less, and not less than three (3) inches in diameter for five (5) dfu or more. The dry vent shall be sized in accordance with Tables 7-3 and 7-5 based on the total fixture units discharging into the wet vent.

The sizing of the individual sections of the wet vent is based on the drainage fixture units discharging into that specific section of piping. The minimum size of the wet vent is 2 inches in diameter, which may serve up to 4 drainage fixture units. Only that portion of the wet vent that exceeds 4 drainage fixture units would need to be increased to a minimum 3 inches in diameter. The requirements of Chapter 9 for vent sizing shall apply to the dry vent. Where the bathroom vent serves one or more water closets the dry vent must be a minimum of 2-inches in diameter.

Additional notes:

- A. *The horizontal wet vent shall be installed at a maximum 1/4-inch per foot slope. While the UPC does not specify a maximum slope, the intent is to avoid high flow velocities which might disrupt the air space for venting.*
- B. *Regarding Item 1 above, since a urinal is included in the definition of a bathroom group, and that the dry vent may serve a urinal per Section 908.2.2, it appears that the urinal was inadvertently left out of the list of fixtures allowed to be served by a horizontal wet vent. Therefore, a urinal is deemed to be included in the list of fixtures in Section 908.2.1.*
- C. *It is not uncommon to have a large bathroom, such as a master bathroom that may include both a bathtub and a shower. It is reasonable to conclude that as long as the total number of fixtures in a bathroom does not exceed the limits of two bathroom groups, a single large bathroom configuration could be served by a horizontal wet vent.*
- D. *Regarding Item 5 above, since the vent for a bathtub or shower can serve as the dry vent and these fixtures are rated at 2 dfu, a common drain or vertical wet vent serving a maximum of two (2) lavatories may serve as the dry vent connection. Additionally, lavatory drains may connect vertically to the horizontal wet-vented branch drain. All other fixture drains and trap arms shall connect horizontally to the horizontal wet-vented branch drain.*



HORIZONTAL WET VENTING FOR BATHROOM GROUPS